

# The New Agenda

IBM and the On Demand Era



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*Dear IBMer,*

By any measure, this is a turbulent and important time to be in the information technology industry.

After the go-go '90s, the new millennium hit the industry with a double whammy: The dot-com bubble burst, and economies slumped. Scores of technology companies have reported losses, and some have disappeared altogether. For the first time in a generation, our industry is actually shrinking.

Yet, customers are still investing hundreds of billions in information technology. Innovation continues apace, and the prospect of the industry actually embracing open standards has never looked better.

*What's going on?*

Certainly, the economy is a factor. But it goes deeper than that. The industry is being rocked by a profound change in computing, in how it is used by business, and the basic assumptions of how it's paid for and accessed.

We've seen sweeping change like this before. It happens once every 15 or 20 years. And every time a new force in computing arrives, new leaders emerge and some companies get left behind. This will happen—is happening—again.

We intend for IBM to lead this new movement in business and computing, which we are calling the era of “*e-business on demand*.”

The on demand era will give our customers extraordinary advantages. But it will require a great deal of vision and work—for businesses that hope to transform themselves into on demand businesses, and for all of us in the IT industry. On demand may be the next phase of e-business, but it is much more than a small evolutionary step.

For IBM, this is a historic opportunity for leadership. We'll need to align and mobilize every part of our company and all of our partners and allies against this strategy. And it will test our unique ability to innovate at the intersection of business and technology. So, each of us must understand his or her role. This document will help you do that. Please take time to read it.

Despite the current slowdown, we see exciting prospects for information technology and for our company. While our competitors are coping with near-term economic pressures—and for some, more fundamental threats to their business models—we have strengthened our hand. While others fight yesterday's battles, we've prepared ourselves for the one to come. We are ready to provide leadership for our industry and our customers. Knowing IBMers, I have no doubt that we will do just that.

A handwritten signature in black ink, reading "Sam Palmisano". The signature is fluid and cursive, with the first name "Sam" and last name "Palmisano" clearly distinguishable.

Samuel J. Palmisano  
*President and Chief Executive Officer*

# Seven years ago, we began a conversation with the world.

WE SAID that a technology had arrived that would change not just computing, but also business, education, health care, government services—every institution and every process and interaction in the world. That technology was the Internet and global connectivity. We called this new era **e-business**.

We believed in this strategic vision so fervently that we staked a lot on it. Billions of dollars. Our brand. Our collective energies and reputations.

Our technical community went to work to transform our products and to develop and bring to market new offerings for e-business. The entire portfolio was reshaped, enhanced and expanded for the networked world.

We took our message to customers in all 170 countries where IBM does business, to the IT industry and investors. We committed to make our own company the world's premier e-business, and we deployed far-reaching online capabilities for how we work with customers, suppliers, partners and each other.

Along the way, we found our voice again. And we rediscovered something IBM hadn't had since the mainframe days: **an idea of computing and what it would change**. The accuracy of our prediction—and the redirection of our own strategies and investments around it—are why IBM has returned to a leadership position in the industry we helped create.

Much has happened in the past seven years. But it's all been a prelude. The real meaning of the networked world is only now coming into view.

**In each phase of its life, the Internet has transformed  
the space into which it has moved.**

*Phase 1*  
**Access**

*Transforming communications.*

E-mail replaced snail mail. Simple database queries—like checking a bank account balance or flight arrival information—superseded telephone calls and standing in lines. All you needed in order to play was a browser, Internet access and a simple website.



*Phase 2*  
**Integration**  
*From access to transactions.*

The “information superhighway” was replaced by “e-business.” Banks enabled customers to move money among accounts. Airlines let you make online reservations. And you could trade stock, apply for loans, purchase goods and services, renew your driver’s license, even get an education. This required far more than simple websites. It required behind-the-scenes integration of internal systems and business processes.

Today, 65% of the 33,000 companies surveyed in IBM’s e-business Adoption Study are in Phase one, and 28% have moved substantially into Phase two. And they’re seeing real benefits. From customer relationship management, to procurement, to the manufacturing floor, enterprises apply network technology to drive any number of benefits—new revenue sources, better delivery of services, significant cost savings. They get smarter and faster.

However, once you start down this path, you realize very quickly that transforming a stand-alone process is a great beginning, but it's not the end game. The real payoff of e-business is *end-to-end integration*. If the supply chain doesn't seamlessly integrate with customer-facing systems, and if neither can interact with finance, logistics and procurement, you're only capturing a fraction of the potential benefits.

Connecting all of those business processes and the systems that support them is becoming a priority for more and more customers. They want a flow of transactions, work, ideas and opportunities of all kinds to ripple immediately through the whole enterprise—and beyond, across the extended value chain on which every business depends.

**So that's where we are today –  
at the cusp of the next major phase of e-business adoption:**

*Phase 3*

## On Demand

*Transformation across processes and enterprises.*



This phase will bring a totally new kind of transformation—or, more specifically, new levels of integration: of processes and applications inside the business; of suppliers and distributors at either end of the business; of customers outside the enterprise; of employees inside it.

# This is e-business on demand.

JUST AS in the earlier stages of e-business, we at IBM have a point of view on what this new model will be. And we're ready to go to our customers with what it means for them. Specifically, we need to help them answer three key questions:

## Question 1

**What is an  
on demand business,  
and why should  
I become one?**

## Question 2

**What kind of  
computing environment  
does on demand  
require, and how do  
I build one?**

## Question 3

**Can on demand  
redefine the way  
I buy and manage  
computing?**

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## Question 1

# What is an on demand business, and why should I become one?

In every industry and sector of global business today — as well as in education, government and institutions of all kinds — leaders are searching for ways to make their organizations more nimble. They need to respond quickly to whatever the world throws at them—changes in demand, supply, pricing, consumer preferences; fluctuations in capital markets, interest rates, oil prices and enrollments; and the unpredictable and unknown—everything from hackers to hurricanes.

- \* Customers want products and services that are specific to their needs, *on demand*.
- \* Employees and students need information and insight *ad hoc*.
- \* Supply chains need to operate in tune with market fluctuations affecting pricing and downstream logistics—*in real time*.
- \* People need access to information, applications and services on their own terms—*when, where and how they choose*.

*The common theme:*

Products, services, invoices, components, medical images, capital, government services, decisions, answers—**on demand.**

For our customers, it almost has the character of a quest: If they could operate their businesses at the speed of the market's and their employees' demands, they would become not only more efficient and faster to respond, but a qualitatively different kind of enterprise.

And, of course, if they could build this kind of on demand enterprise ahead of their competitors, they would realize significant marketplace advantages.

**Look across industries today and you see this quest for end-to-end integration, for a more responsive and dynamic business, for *on demand business*.**

- \* If only our **bank** could check credit, tax values and liens instantly and set up loan servicing through our processing partner (offering online billing and customer support), we could cut mortgage processing time to minutes, not days—and save 50% of our costs.
- \* If only our **car company** could bring the inventory efficiency we've achieved in manufacturing—where today we hold only 45 minutes of parts in our production plants—to distribution, where there are 90 days' worth of depreciating inventory on our dealers' lots. If only we could use the wireless technologies now in our cars to increase customer satisfaction through an invisible, seamless maintenance capability—software downloads replacing in-the-shop tune-ups; or to apply engine diagnostics remotely to make engineering changes, manage recalls and drive down warranty costs (creating billions of dollars in savings).



- \* If only our **retail firm** could strip out inventory-carrying costs by keeping in the warehouse and delivering to the store exactly, and only, what is needed for that day's sales.
- \* If only our **pharmaceutical company** could access "integrated patient data" in real time, through in-home diagnostic, monitoring and communications technologies, we could move more of our business to the creation of customized medicines for smaller patient populations, rather than depend on expensive, high-stakes "blockbuster drugs."

Individual companies are taking on the hard work of integrating their own internal, stand-alone processes—and that's just the beginning of the story. In industry after industry, companies are rethinking their fundamental business designs as value chains become much more fluid and interwoven.

Take banking, for instance. Consumers today may not realize it, but when they interact with their "bank," they are actually dealing with a wide variety of bank-owned distribution channels (branches, websites, call centers), as well as *non*-bank touchpoints (retail stores, airline travel agencies, finance arms of car companies). And behind the scenes, the bank is a mixture of specialized product suppliers (mortgage originators or manufacturers of investment products) and best-of-breed

processing utilities (for payments, credit and fraud management).

On one level, the bank—and the banking industry—are *dis*-integrating. But in a larger sense, the industry is reformulating and connecting with other industries in more fluid and productive ways. And this dramatically *increases* the importance of integration—external integration—of business systems and processes.

IBM, for example, partners with companies to provide PC manufacturing and certain HR support functions that were formerly done inside. These operations haven't simply been off-loaded to other companies. Because both partners' operations and processes are tightly integrated with IBM's, the seams are invisible to the IBM employee seeking HR support and to the PC customer ordering products.

## *On demand business—a definition:*

An enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with flexibility and speed to any customer demand, market opportunity or external threat.

### Key Attributes

#### **Responsive**

An on demand business will seem almost intuitive in its ability to sense and respond to dynamic, unpredictable changes in demand, supply, pricing, labor, competitors' moves, capital markets and the needs of all its constituencies—customers, partners, suppliers and employees.

#### **Variable**

An on demand business will use variable cost structures and adapt processes flexibly. This flexibility will enable it to reduce risk and to do business at high levels of productivity, cost control, capital efficiency and financial predictability.

#### **Focused**

An on demand business will concentrate on its core competencies, its differentiating tasks and assets, while tightly integrated strategic partners manage selected tasks, everything from manufacturing, logistics and fulfillment, to HR and financial operations.

#### **Resilient**

An on demand business will manage changes and threats—from computer viruses, to earthquakes, to spikes in usage—with consistent availability and security.

In the end, on demand business enables business leaders to see and manage their company as an *integrated whole*—even if important parts of it are handled by others. This is about a lot more than operational efficiency. It will make possible a much more dynamic sort of enterprise transformation.

**Until now companies have been “on the Net.”  
Now they will become part of it.**

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## Question 2

# What kind of computing environment does on demand business require, and how do I build one?

Who wouldn't want to be an on demand business and unlock the value we've just described? There's just one catch: Today's computing infrastructure is not prepared to support that kind of highly dynamic, responsive, integrated business environment.

## The On Demand Operating Environment

The past 40 years of IT evolution have left most companies with an enterprise computing infrastructure that is heterogeneous, widely distributed and increasingly complex. It's made up of different kinds of systems located in and managed through different departments and geographic locations. To realize the benefits of

on demand business, we will need to migrate to a new computing architecture. We call it an On Demand Operating Environment. It has four essential characteristics:

- \* Integrated
- \* Open
- \* Virtualized
- \* Autonomic

## Integrated

## Open

## Virtualized

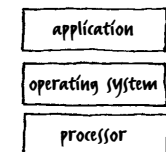
## Autonomic

INTEGRATION here goes far beyond connecting disparate computing assets, such as clients and servers, so they can share information and “talk.” The On Demand Operating Environment must enable the integration of core business processes and systems so that business itself can flow inside and across enterprises.

This is not easy. It requires the integration of vast amounts of data and of legacy and custom applications spread throughout the enterprise. (Already, 40% of everything enterprise customers spend on IT goes for just making the stuff work together.) It also requires transaction processing of the highest order. We’re not talking

about the transmission of e-mail or MP3 files, but the choreography of customer data, capital, health care records, engineering designs, citizens’ votes. The very nature of these kinds of transactions demands data integrity, end to end—whether one end is in a government agency, a supplier, a distributor or a PDA in the hands of an individual consumer.

THE INTERNET  
ALLOWED  
COMPUTERS  
EVERYWHERE  
TO “TALK”

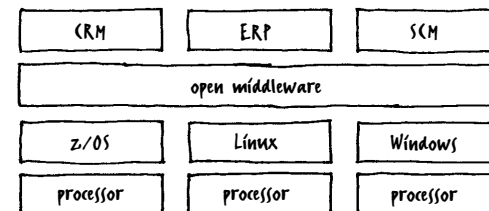


WHETHER A  
MAINFRAME OR A PC,  
COMPUTERS HAVE  
BEEN BASICALLY  
MONOLITHIC

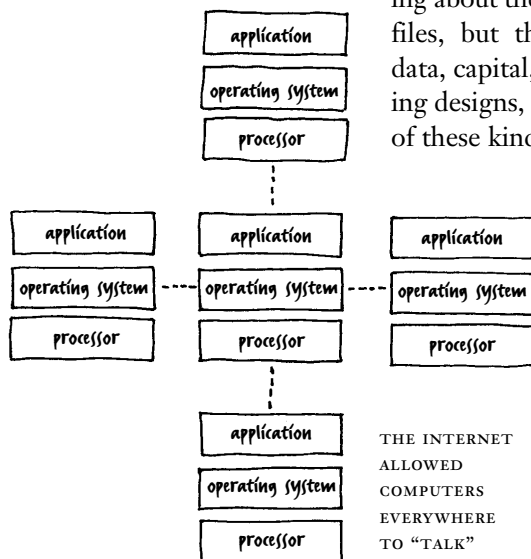
This calls for nothing less than a **new software infrastructure**. We see it emerging today in the form of web services and new development tools that ease the integration of devices, applications and business processes. Applications—which have always integrated “vertically” (with the operating system of their stand-

alone computer)—will now integrate with other applications “horizontally.” So developers will increasingly write their applications to a layer of software—middleware—that spans servers and systems. In essence, applications are being decoupled from the underlying infrastructure.

This is one reason why the WebSphere platform has enjoyed rapid growth and adoption, and not just with customers (who use it for tasks ranging from application and workflow integration to creating Dynamic Workplaces for their employees), but also with a rapidly growing number of developers—more than 9,000 software companies and 1.5 million programmers so far.



THE ON DEMAND  
OPERATING ENVIRONMENT  
WILL ALLOW COMPUTERS  
EVERYWHERE—AND THE  
BUSINESS PROCESSES  
THEY SUPPORT—  
TO INTEGRATE AND  
WORK TOGETHER



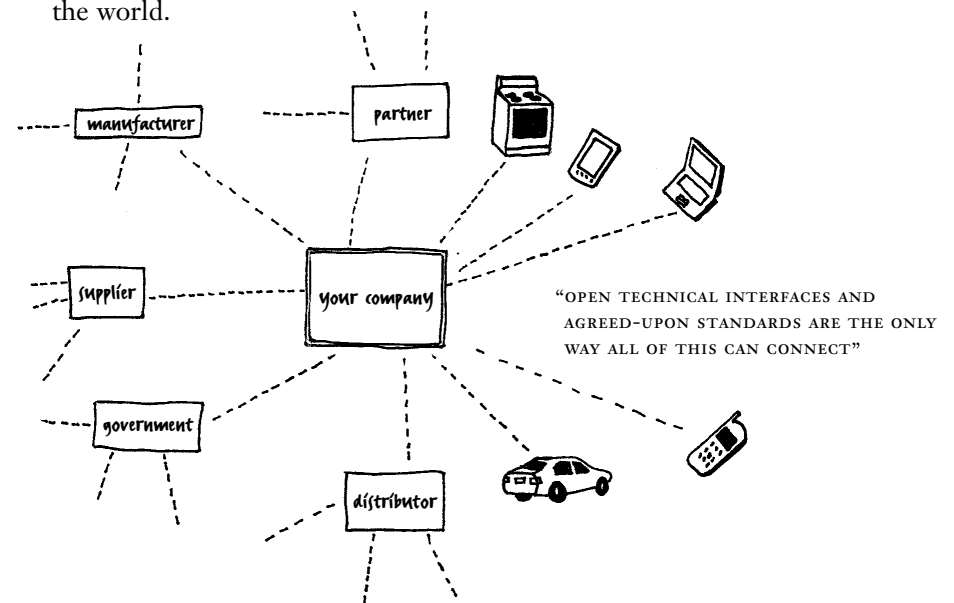
THERE ARE REALLY ONLY TWO CHOICES: Either everybody uses the same technology, or all technologies can connect and integrate.

When IT was confined to its own silo or did not extend beyond the walls of the enterprise, maybe a technology architecture provided and controlled by a single company could prevail. (IBM benefited from that, once upon a time.) But this is no longer realistic. Customers have made enormous investments in existing data, applications and transaction systems, and their very businesses depend on the infrastructure they already have in place. “Rip and replace” is not a viable option.

Without open standards, the internal integration we’ve just discussed would remain a gargantuan task. Then think of the challenge of *external* integration—integration with other enterprises, other business processes and applications, and with the plethora of pervasive computing devices coming online (everything from game consoles to telematics in cars).

Open technical interfaces and agreed-upon standards are the only realistic way all of this can connect.

The good news is that, ever since the world embraced Internet protocols, open standards have been gaining widespread adoption—from Java and XML to web services and the emerging Open Grid Services Architecture. And the granddaddy of Open Source success stories, the free operating system Linux, is moving rapidly into mainstream business throughout the world.



“VIRTUALIZATION” has actually been around since the earliest days of electronic business computing. IBM put the *main* in mainframe, in part, by creating virtual memory, virtual storage, the virtual processor. (For trivia buffs, this is why IBM’s MVS stands for Multiple Virtual Storage and VM for Virtual Machine.) This enabled the computer to do many processing jobs, for hundreds and eventually thousands of users simultaneously. Users got mainframe-strength computing, and businesses were able to get more use out of an expensive and powerful asset.

Fast forward to today. Almost every organization is sitting on top of enormous, unused computing capacity, but it’s distributed all over the place. Mainframes idle 40% of the time. Unix servers are actually “serving” something less than 10% of the time. And most PCs are doing nothing for 95% of a typical day. This is an intolerable situation for customers. (Can you imagine an airline with 90% of its fleet on the ground, an auto maker with 40% of its assembly plants idle, or a hotel chain with 95% of its rooms unoccupied?) Once again, virtualization can help.

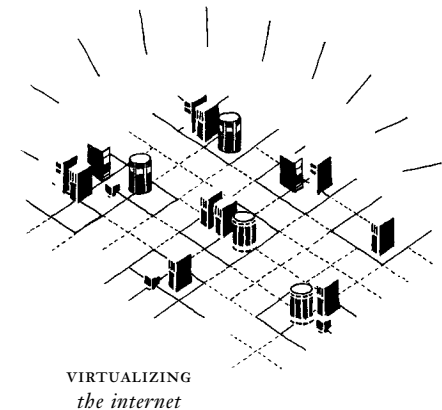
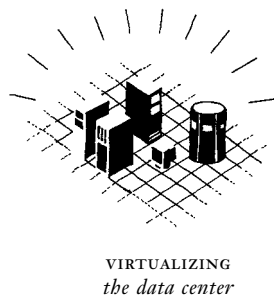
Many companies are already getting more out of their infrastructure through server consolidation or capacity-on-demand offerings. And now there’s an opportunity to *virtualize the*



*entire data center* with an emerging technology called **grid computing**. Like the Internet, grid is based on open technical standards and protocols. When implemented, grid allows a collection of distributed computing resources to be shared and managed as if they were one large, virtual computer. (Think of it as doing for computing what the World Wide Web did for content.)

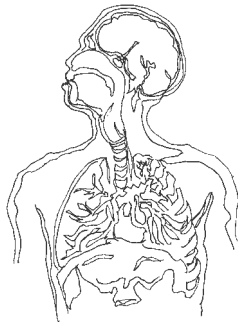
Grids are being built first in government laboratories and universities. From there, they will most likely be implemented *inside* of companies. IBM, for example, has implemented a grid to enable engineers to design next-generation microprocessors. Servers and engineering workstations from multiple business units are pooled and shared to support compute-intensive chip design and verification simulations.

These kinds of “intra-grids” will allow customers to increase the utilization of their computing assets significantly. (The IBM microprocessor design grid runs at above 80% utilization, on average.) Then, as grid takes hold in more and more computing systems, it will move beyond the enterprise walls. Customers’ internal grid systems will connect to the external grid. And that will be, in essence, the *virtualization of the Internet itself*.



COMPLEXITY is the number-one headache of CIOs. And that's just the complexity of conventional systems *within* the enterprise. Now, think about the on demand era, with its ubiquitous integration of business processes, entities, applications and millions, ultimately billions, of devices. Computing systems will rapidly become too complex for humans to manage effectively—or to configure, secure, optimize or repair. The solution? Technology that manages itself—similar to the human autonomic nervous system.

***Self-managing systems:*** We'll need to be able to take for granted such things as embedded security and privacy protection, workload balancing, upgrading of software and fending off viruses—the same way we take for granted our body's management of breathing, digestion, circulation... and fending off viruses. This will be as hard as it sounds. Autonomic technologies will require true invention, real



(and new) science at both the component and overall system level.

In the year since IBM launched its autonomic computing initiative, the company has introduced a good number of products with autonomic capabilities, including a new DB2 database with self-managing and self-tuning features and Tivoli products that predict storage requirements and allocate resources. The business benefits of autonomic are real and compelling. For instance, Rapid Restore is an autonomic software tool, preloaded on all IBM PCs, that restores data and applications after a PC failure. Using it, the average time to restore a PC shrank from two hours to 30 minutes (and PC support costs declined 52%).

Making autonomic a reality will take time. Yet, as with “frontward and backward compatibility,” “scalability” and “availability” strange and far-away-sounding concepts in their day—autonomic will happen. It is a must-have characteristic of the On Demand Operating Environment.

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### Question 3

# Can on demand redefine the way I pay for and manage computing?

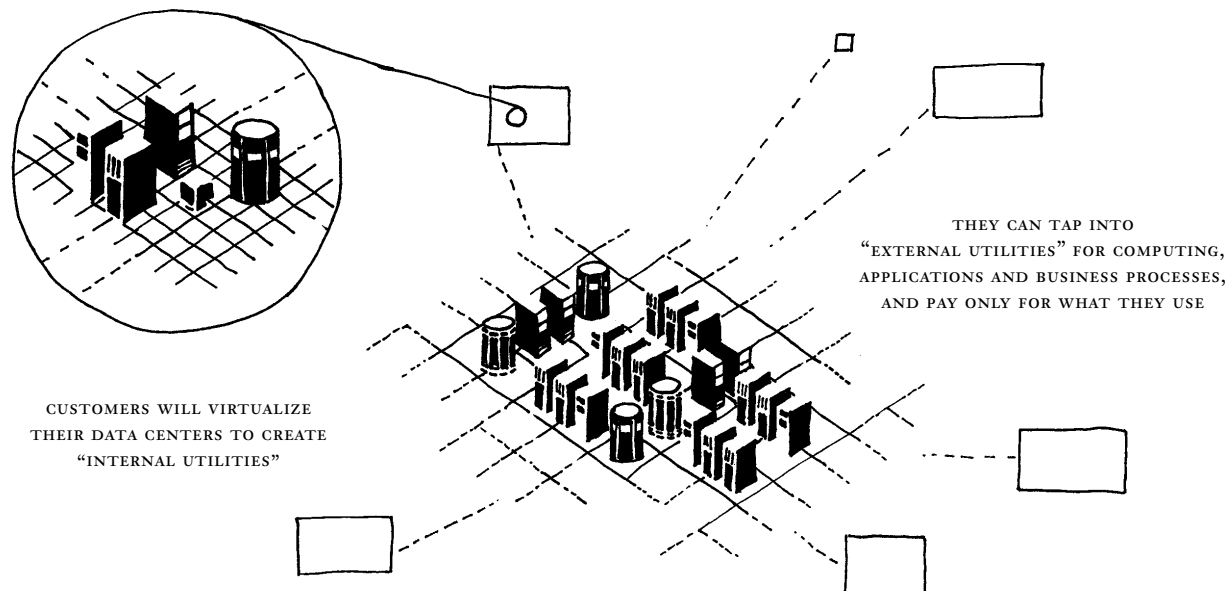
Yes, and that's a good thing for IT customers. Until now, the choices have been fairly limited and rigid. If you wanted more computing, you bought more computers, or more powerful computers. Maybe you outsourced your IT operation, in whole or in part. But the basic economic equation hasn't changed much for decades.

This becomes a very real problem for customers as they move into the on demand era. Because the real world is dynamic, an on demand business must respond quickly to opportunities, changes, threats and fluctuations. It must be highly *variable*, able to adjust itself in real time. By contrast, the terms and conditions by which customers pay for information technology have been inflexible. Today, IT is a fixed solution to a variable problem.

As the computing model shifts to an On Demand Operating Environment, more flexible and economically attractive choices will become available for customers, and viable for the IT industry. In many respects, this is the most game-changing aspect of the on demand era for IT companies.

Customers are today benefiting from server consolidation, usage-based pricing and capacity-on-demand approaches. Now we aim





to *virtualize the data center*. This will allow businesses to build, in essence, "internal utilities." As virtualization moves into the Net itself, it will make possible the widespread use of "external utilities"—acquiring computing and applications from service providers and paying only for what you use.

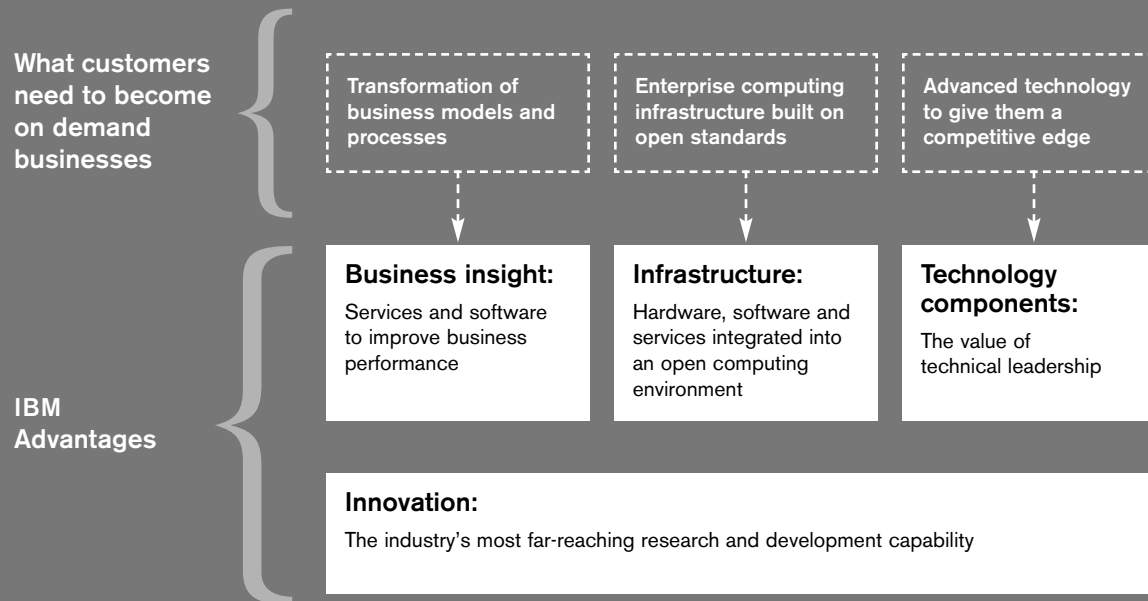
In other words, companies will be able to access and pay for computing the same way they get electricity, telecommunications or water—by the flip of a switch, the push of a button, the turn of a handle...or the click of a mouse. When traffic or transactions spike, capacity can be added automatically over the Net, and bills will go up. When things are quiet, the company pays less—and capital is freed up to invest in the business. IBM Global Services is already delivering utility services—server and storage

capacity, as well as business processes like procurement and claims processing—for companies such as Dow Chemical, American Express, Empire Blue Cross and Saks.

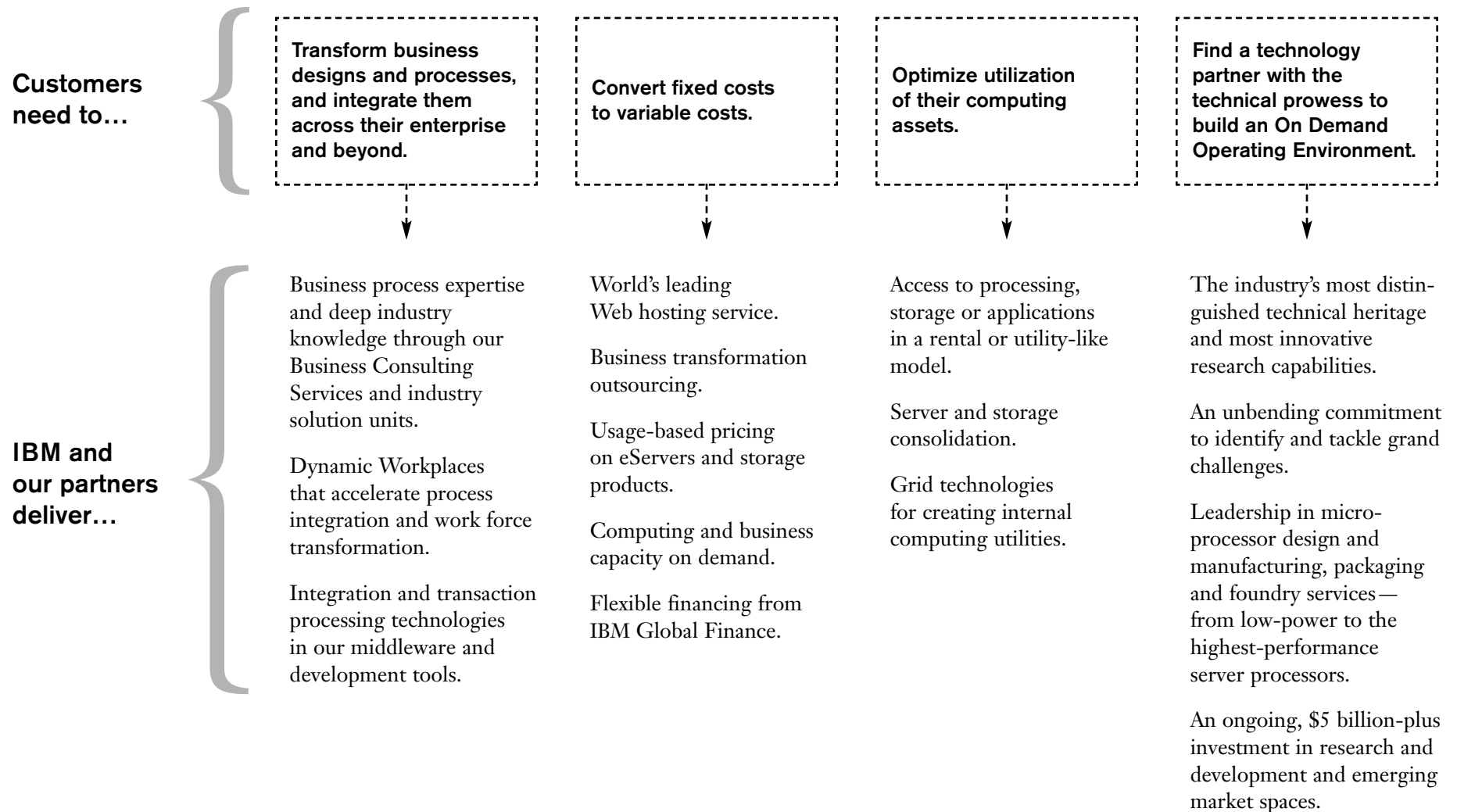
On demand business, made possible by on demand computing, won't happen overnight. But it will happen, because the value proposition is overwhelming. For large businesses that spend hundreds of millions of dollars on IT annually, improving utilization even a few percentage points a year—without rolling in another piece of hardware, or buying a bigger database or more storage—is a huge promise, particularly in tight economic times. For smaller businesses, this is the start of a revolution. They will be able to access levels of computing power they could never justify today.

# \* You are here.

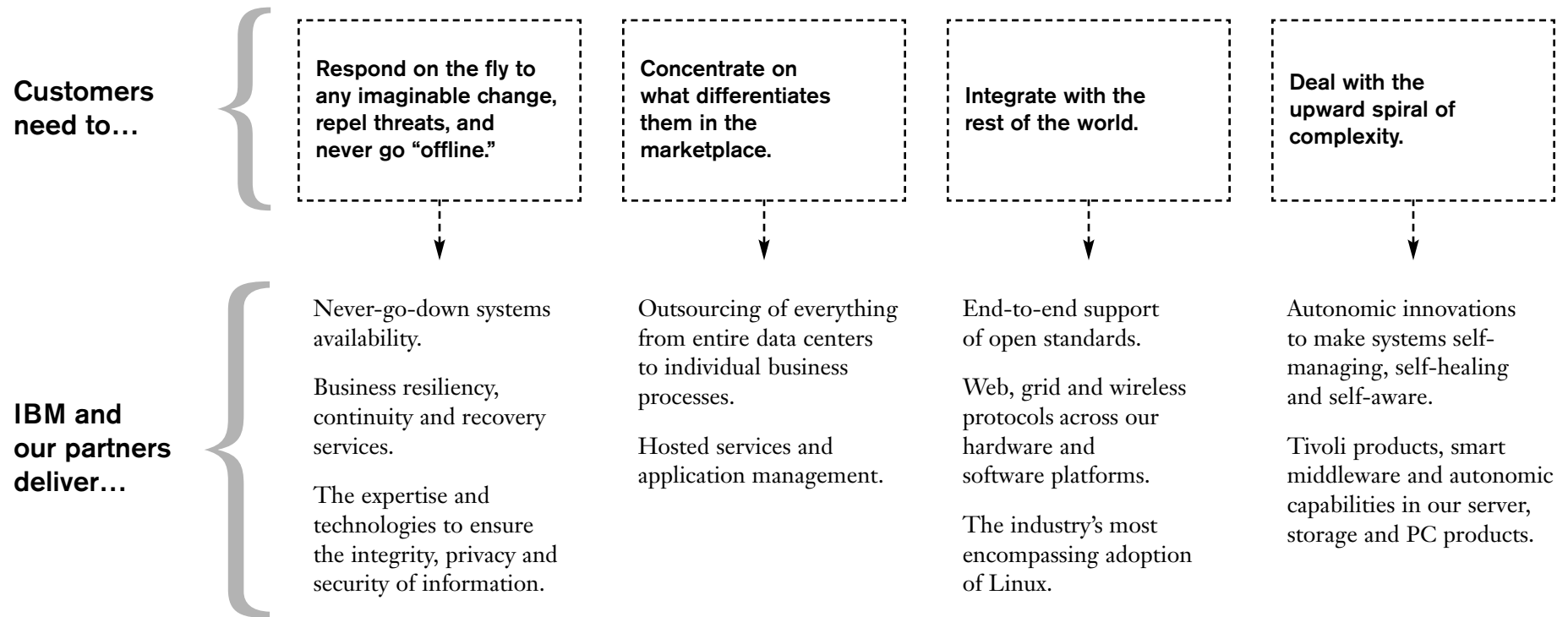
It's an exciting, challenging future. Let's consider for a moment all of the things that will be required to make e-business on demand a reality, and then line up our company against those requirements.



## *A closer look at what on demand requires:*



*A closer look continued...*



It's clear that the on demand era plays to IBM's strengths—and that isn't mere coincidence. Because we believed in this strategy, and because we understood it ahead of our competitors, we have, over the past couple of years, been developing, amassing and acquiring the technology, expertise and capability necessary to lead in the next era.

# Reality check.

On demand business, like all historic shifts, will change a lot more than its immediate surroundings. If we're right—if both technology and business are moving to a genuinely new model—then that will impact not just our product lines, but our behaviors...not just go-to-market strategies, but public policies...not just our strategies, but our relationships.

Is the IT industry ready for that?  
Is IBM?

*Are you?*

## Revamping infrastructure is the *easy* part.

THE really tough part of becoming an on demand business is changing management mindset and ingrained business thinking.

On demand business turns vertical management systems and structures on their sides, so that information and knowledge can flow to whatever part of the enterprise needs them. It challenges long-held notions about organization and hierarchy.

Separating information-flow systems from traditional, vertical, organizational control systems is hard. And it can be painful to take away “ownership” from some people—ownership of information, of customer data, of infrastructure—and it may be even harder to give it to many others to share. Yet “silo” thinking and obsession with control are show-stoppers for creating an on demand business.

This was an important reason we acquired PricewaterhouseCoopers Consulting and created our 60,000 person-strong Business Consulting Services unit. We wanted to strengthen our capability to help customers not only envision new business designs, but implement them.

## Back to the drawing board. (And that’s good news.)

IBM’s technical community has a distinguished record of stepping up to even the grandest of “grand challenges.” But we acknowledge that on demand business and the On Demand Operating Environment present scientific and technological obstacles we don’t yet see our way around.

Which is actually pretty exciting.

The last time we led a comparably big computing-model shift—to mainframes—there were also more questions than answers, also plenty of white spaces that needed to be filled in. That spurred us to pioneer the DRAM, the magnetic disk drive, high-end system architecture, semiconductor packaging, FORTRAN and the relational database.

So yes, on demand is a huge undertaking. And yes, that’s going to require serious innovation and collaboration across the industry research community and the entire field of computer science. But we’re confident that, together, we can break new ground again.

# Open standards are not a religion. They're a business.

ALMOST everybody in the IT industry agrees with the ideals of openness and common technical standards. Some get downright zealous about it. And you don't need to be a physicist or a philosopher to realize that we can't move everything in the world—the systems, platforms, currencies, laws, regulations, customs, languages, business practices and cultures that make up the ever-more-global marketplace of the 21st century—onto one single *anything*, especially a computing architecture.

The problem, though, isn't one of philosophy. It's "How do we make money in an open world?" On an open playing field, it can seem harder for some technology companies to differentiate themselves.

We have to help our colleagues in other IT companies see that standards ultimately make the pie bigger for everybody. We have to show that standards will spur customers to increase investments in IT, in new applications and solutions, and thus restore growth to the industry.

# There's a big difference between selling computers and selling computing.

BECAUSE it's so appealing to customers, we believe computing-as-a-service will be a significant business. It will also represent a very big change for them—and a magnitude-10 earthquake for many technology companies.

In the world of utility computing, the basis of competition shifts from selling millions of boxes and software licenses to something altogether different: The know-how to build and manage massive computing complexes that support thousands of enterprises in a secure, reliable, on demand way. Expertise in business processes and applications. Vast economies of scale. A reputation for trust and integrity.

As our competitors will undoubtedly discover, this business is not the same as managing an assembly line, or switching from selling "things" to selling "services."

# Winning hearts, minds... and developers' toolkits.

THE IT industry has always been driven by customer investment in applications, in the software that turns technology into business benefit. That's not about to change. But for which platforms will applications in the on demand era be developed? With what tools? To what architecture?

In their hearts, developers long for open everything. But even though they may chafe at the controlling hand of a particular software company, there are significant economic advantages to being part of that company's ecosystem. The economic arguments, however, change when computing is open and standards-based and when applications are decoupled from the underlying infrastructure.

If we can't persuade, motivate and equip the world's millions of software developers to move to open standards—if we can't get them to share our belief that the “platform” with the largest user base is the Net itself—then we'll all wait a long time for the more efficient, more productive IT world everybody hopes for (well, almost everybody).

# What isn't a “consumer business”?

WHAT do consumers consume? Cars, appliances, groceries, loans, clothing, airline travel, education, prescription drugs—all of which can be delivered faster, at lower cost, in a more personalized fashion, with higher quality, in the on demand era.

But for all of that to happen, businesses, governments and academic institutions have to undertake end-to-end transformation, and they have to make the right infrastructure choices. We will help them do all of that—quietly, behind the scenes, as we always have.

The result of our work and innovation? Real and lasting impact on business and society—and on billions of individuals.



# The fusion of business and technology is harder than it sounds.

OLD WAY: Invent something cool, find a business need for it, sell it, rake in the dough. New way: Understand business needs, let that inspire innovation, apply the cool technology, rake in the dough.

Sounds easy enough. But it means that IT companies with their eye on the business buyer will have to re-think more than how they “go to market” and who the “line-of-business decision-maker” is. They will have to do more than posit or imagine what grand business value some new technology will unleash for customers. They must be willing to share the risk of implementing a technology solution and prepared to tie IT remuneration to tangible business results—productivity gains, inventory turns, cycle time improvement.

Scary? Not for technology companies that actually understand how serious business operates. Not for technology companies that are ready and able to turn “customers” into partners.

# Policy matters.

WHETHER or not the IT industry is “maturing,” its leaders must.

The spread of the Net is driving everything our industry creates into every factory, store and office, and also into every home, classroom and voting booth. Crucial issues such as privacy, equal access, data security, protection of children and education—now joined by questions of national and international security—are all profoundly affected by this onrush. And the dawn of on demand only ups the ante—moving these issues to the level of the emergent global infrastructure.

During the 1990s, too many technology companies took the view that society had no place in the dialogue about technology’s future. Going forward, public policy and technology development must truly go hand-in-hand. At the end of the day, what we’re doing isn’t most importantly a competitive game. In fact, it’s not a game at all.

## Summing Up

- 1 } We are on the cusp of the next phase of e-business—the era of the on demand business and on demand computing.
- 2 } We must help our customers become on demand businesses, because those who move first will have enormous competitive advantages over those who are slow to adapt.
- 3 } This is as much about the transformation of business as it is about technology.
- 4 } We must work with our customers and the industry to evolve the model of computing from what it is—a suboptimized crazy-quilt of distributed systems—to an On Demand Operating Environment.
- 5 } We must lead the fight for open standards, because it benefits our customers, it is the only way the new era can be realized—and because it will expand growth opportunities for the entire industry.
- 6 } IBM must become a showcase on demand company. (*See point 2*)
- 7 } On demand capabilities are a natural extension of what IBM provides today. Customers can become on demand businesses by establishing a roadmap for business process transformation, building a flexible and open middleware platform, and implementing a highly efficient server and storage infrastructure. IBM is assisting tens of thousands of customers to do just that.
- 8 } We should be confident. This new era plays to what IBM does best: We understand business. We do serious enterprise computing. We innovate. And we know how to bring all of this together for our customers.

# Our time again.

While IBM's products, services and organization have changed radically over the past century, we have always aspired to do two things better than any other company in the world:

*We create innovative technologies, and we help our customers apply them to transform what they do and how they do it.*

To live up to this enduring mission, each of us has to understand—and shape—change in both technology and business. And we have to be willing to transform any aspect of our own company. This restless self-renewal has allowed IBM to reinvent itself, grow and lead, time and time again.

Over the last 10 years we've learned something about the will to survive, and the courage to lead. We have an opportunity to apply those lessons to a new era.

Today the worlds of technology and business are once again undergoing fundamental change. Companies are in turmoil. Many people are confused, skeptical, anxious. Once again, we can step forward and demonstrate all that is unique about IBM, to provide insight, solutions and leadership—for our customers and our industry.

